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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,791	07/14/2003	Thorsten Pannek	10191/3085	7312

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EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,791

Applicant(s)

PANNEK ET AL

Examiner

Christopher P. Bruenjes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on October 11, 2005. These drawings are acceptable.

WITHDRAWN REJECTIONS

2. The objection to the drawings of record in the Office Action mailed April 6, 2005, Pages 2-3 Paragraph 3, have been withdrawn due to Applicant's amendments in the Paper filed October 11, 2005.

3. The 35 U.S.C. 112 rejections of claims 1-9 of record in the Office Action mailed April 6, 2005, Pages 4-5 Paragraph 4, have been withdrawn due to Applicant's amendments in the Paper filed October 11, 2005.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. The 35 U.S.C. 102 rejections of claims 1-2 and 5 as anticipated by Reichenbach are repeated for the reasons set

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forth in the previous Office Action mailed April 6, 2005, Pages 6-7 Paragraph 5.

5. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Reichenbach et al (WO 01/46066 A2). US 2004/0065932 A1 is used as the English equivalent for WO 01/46066 A2 for purposes of citing within this rejection.

Reichenbach et al anticipate a component comprising a functional layer (reference number 16, Figure 11). A surface micromechanical structure is produced in the functional layer including movable elements (reference number 26, Figure 5) and immovable elements (represented by the other parts of the functional layer 16). The component further comprises at least one electrically non-conductive first insulation layer (reference number 12, Figure 7 outside the void area) and at least one first sacrificial layer (reference number 30, Figure 7) and a substrate (reference number 10, Figure 7). The substrate is connected to the functional layer via the first insulation layer and first sacrificial layer (Figure 7). The movable elements are exposed by removing the at least one first sacrificial layer (Figure 10). The at least one electrically non-conductive first insulation layer includes a material that is not substantially attacked by removing of the at least one

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first sacrificial layer (page 3, paragraphs 43 and 44). The material of the at least one first sacrificial layer has different physical properties in comparison to material of the at least one electrically non-conductive first insulation layer because the etching process in the steps between Figures 9 and 10 selectively only attacks the first sacrificial layer and not the at least one electrically non-conductive first insulation layer (p.4, paragraph 48). Therefore, since the etching only affects the first sacrificial layer and not the insulation layer the two layers must have different physical properties, because if they had exactly the same physical properties both layers would be affected by the etching.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. The 35 U.S.C. 103 rejections of claims 3-4 and 6-7 over Reichenbach in view of Laermer are repeated for the reasons set forth in the previous Office Action mailed April 6, 2005, Pages 8-11 Paragraph 6.

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7. The 35 U.S.C. 103 rejections of claim 8 over Reichenbach in view of Laermer and further in view of Zavracky is repeated for the reasons set forth in the previous Office Action mailed April 6, 2005, Pages 11-13 Paragraph 7.

8. The 35 U.S.C. 103 rejection of claim 9 over Reichenbach in view of Laermer, Zavracky, and Chatterjee is repeated for the reasons set forth in the previous Office Action mailed April 6, 2005, Pages 13-16 Paragraph 8.

ANSWERS TO APPLICANT'S ARGUMENTS

9. Applicant's arguments regarding objections to the drawings of record have been considered but are moot since the objections have been withdrawn.

10. Applicant's arguments regarding the 35 U.S.C. 112 rejections of claims 1-9 of record have been considered but are moot since the rejections have been withdrawn.

11. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-2 and 5 as anticipated by Reichenbach have been fully considered but they are not persuasive.

In response to Applicant's argument that none of the Figures 5, 7, 10, or 11 teach all that is claimed in claim 1 alone, Figures 1-13 are describing the same article. Therefore, Figures 5, 7, 10, and 11 can be used in combination to teach the limitations of claim 1, especially in light of the fact that the claimed invention includes limitations that would not be present in the same manufacturing step. Specifically, claim 1 requires at least one first sacrificial layer, but also requires that the at least one first sacrificial layer be removed in order to expose the movable elements. Therefore, in the same manner the Figure 7 of Reichenbach teaches all of the limitations of claim 1 in which the movable elements are not exposed because the first sacrificial layer has not been removed, and Figure 10 and 11 of Reichenbach teaches all of the limitations of claim 1 in which the first sacrificial layer is removed. Thus, the claimed intermediate product before removing the at least one first sacrificial layer is taught in Figure 7 and the claimed final product after removing the at least one first sacrificial layer is taught in Figures 10 and 11.

In response to Applicant's argument that the features of claim 2 are not taught in Reichenbach, the limitations of claim 2 merely state that the electroconductive layer is structured and is situated between the at least one electrically non-

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conductive first insulation layer and the at least one first sacrificial layer. The limitations of claim 1 encompass an embodiment that includes the first insulation layer and first sacrificial being the same vertical layer in the article as admitted in the arguments regarding the 35 U.S.C. 112 rejections. Therefore the broadest reasonable interpretation of the limitation "situated between" includes the embodiment in which a first electrically non-conductive insulation layer and a first sacrificial layer are above the electroconductive layer and a second electrically non-conductive insulation layer and a second sacrificial layer are below the electroconductive layer. Thus, the location of the electroconductive layer meets the limitations of claim 2 without requiring the electroconductive layer placed in the interface of the insulation layer and sacrificial layer. Note also that although "situated between" admittedly does include an arrangement in which the conductive layer is in contact with, and positioned within the interface between the insulation layer and sacrificial layer, it does not limit the article to this specific arrangement.

12. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 3-4 and 6-7 over Reichenbach in view of Laermer have been fully considered but they are not persuasive.

In response to Applicant's arguments regarding the deficiencies of Reichenbach with regard to the limitations of claim 1, see the answers to those arguments above.

13. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claim 8 over Reichenbach in view of Laermer and Zavracky have been fully considered but they are not persuasive.

In response to Applicant's arguments regarding the deficiencies of Reichenbach with regard to the limitations of claim 1, see the answers to those arguments above.

14. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claim 9 over Reichenbach in view of Laermer, Zavracky, and Chatterjee have been fully considered but they are not persuasive.

In response to Applicant's arguments regarding the deficiencies of Reichenbach with regard to the limitations of claim 1, see the answers to those arguments above.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

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reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher P Bruenjes
Examiner
Art Unit 1772

CPB *CPB*
November 18, 2005


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

11/18/05